

TAL' A. A.

Tal' A. A. Termoregulyushchiy ventil' TRV-2 [The TRV-2 Heat-regulating Valve],  
(description and instructions for assembly and operation), Tartu,  
1953, 9 pages with sketches (Estonian SSR Ministry of Local Shale-  
Chemistry Industry, Main Administration of Metal-Working Industry,  
"Termoavtomat" Plant of Tartu).

TAN, A. A.

"Vysnogradskiy's Problem in the Theory of Direct Regulation (Taking under Consideration Self-Regulation of the Object and Reaction According to the Derivative of the Regulating Parameter)", Avtomatika i Telemekhanika, Vol 14, No 5, 1953, pp 604-637.

Discusses a system of direct regulation of the object with self-compensation taking into account viscous and dry friction in the regulator and in the regulation according to the deviation of the regulating parameter and its derivative.

Using the method of point transformation of a surface into a surface, the author divides the space of the parameters of the system into the regions of various characteristic behavior: (1) region of absolutely stable equilibrium (at any arbitrary initial conditions the system returns to one of the equilibrium states), (2) region of conditionally stable equilibrium (depending on initial conditions, the system either returns to one of the equilibrium states or indefinitely oscillates), (3) region of absolutely stable self-excited oscillations (under any initial conditions in the system self-excited oscillations are established), (4)

Continued

(4) region of conditionally stable oscillations (depending on the initial conditions in the system self-oscillations are established or it oscillates indefinitely), and (5) region of absolute instability (under any initial conditions the system oscillates). The last three regions correspond to systems with negative self-compensation.

In addition, for a system with negative self-compensation it is shown by the second method of Lyapunov that the presence of dry friction does not produce instability (a system, stable without dry friction, is stable in any case of dry friction).

The work consists in the generalized solution of A. A. Andronov and A. G. Mayer (cf. Doklady Akad Nauk SSSR, 1945, Vol 47, No 5, pp 345-348; Avtomatika i Telemekhanika, 1947, Vol 8, No 5, pp 314-348; ibid, 1953, Vol 14, No 5, pp 505-530) of the famous problem of Vyslnegradskiy on direct regulation. (RZhMekh, No 11, 1954)  
SO: Sum Nol 443, 5 Apr. 55

TAL', A.A.; STYRIKOVICH, M.A., redaktor; ANTRUSHIN, B.D., redaktor;  
AUZAN, N.P., tekhnicheskiy redaktor

[Hydrodynamics and heat exchange during boiling in high-pressure  
boilers] Gidrodinamika i teploobmen pri kipenii v kotlakh vysokogo  
davleniya. Moskva, 1955. 254 p. (MIRA 9:1)

1. Akademiya nauk SSSR, Komissiya po paru vysokikh parametrov.
2. Chlen-korrespondent AN S.S.S.R. (for Styrikovich)  
(Boilers)

TAL', A.A. (Moskva)

Dynamic properties of single-phase sections of steam-water tubing  
in boilers. Izv.AN SSSR.Otd.tekh.nauk no.2:49-58 F '57.  
(MLRA 10:5)

(Boilers)

TAL', A.A., kandidat tekhnicheskikh nauk.

Approximate determination of the dynamic properties of single phase  
heat exchangers [with summary in English]. Teplotoenergetika 4  
no.10:69-71 O '57. (MLRA 10:9)

1. Institut avtomatiki i telemekhaniki Akademii nauk SSSR.  
(Heat exchangers)

TAL, A.A.

SOV/2702

## PHASE I BOOK EXPLOITATION

28(1) Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki. 1st Moscow, 1957  
Seminar po pnevmogidravlicheskoy avtomatike. Sovetskaya

Sistemy ustroystva i elementy prensv. i hidroavtomatiki. Sovetskaya  
(pneumatic and hydraulic circuits devices, and elements of  
Automation). Collection of papers. Moscow, Izdat. Akad. Nauk SSSR,  
1959. 233 p. Ferrara slip inserted. 2700 copies printed.

Ros. Ed.; M. A. Ayzerman, Doctor of Technical Sciences, Professor  
Ed. of Publishing House; A. A. Tali; Tech. Ed.; T. P. Polynova.

PURPOSE: This collection of papers is intended for scientific  
research workers and engineers in the field of design and con-  
struction of pneumatic and hydraulic equipment and accessories  
for automation.

COVERAGE: This collection contains papers read at the Seminar on  
Pneumatic and Hydraulic Devices for Automation. May 28, 1957.  
The collection is divided into the following three groups: 1) newly developed pneumatic and hydraulic circuits, pneumatic  
and hydraulic devices, including regulating units, transmitters  
and transducers, actuating mechanisms, special-purpose devices,  
and auxiliary equipment; 2) elements of pneumatic and hy-  
draulic devices for automation, such as controlled and permanent  
nozzles and diaphragms. No personalities are mentioned. Below  
follow several of the papers.

Berezovets, G. T. Moscow. Pneumatic Ratio Controllers 122

Without Mechanical Diaphragms  
Types RS-1 and RS-2 ratio controllers are described. The  
change of ratio in relation to the throttle opening and the  
primary pressure is discussed.

Zaluzhnyi, L. V. and A. I. Smirnov. Kiev. Designing of Non-  
Linear Transformation in Pneumatic Systems by Means of "Nozzle-  
Tube" Type Elements 128

This paper discusses the first stage of an investigation  
made at the Laboratory for Pneumatic and Hydraulic Automation,  
IAT AN SSSR. The characteristics of a pneumatic nozzle-tube  
type relay consisting of a nozzle and pivot tube are described.  
The functioning and possible uses of this device are de-  
scribed. Schematic diagrams of the relay and photographs of the  
experimental installation are shown.

Berdene, T. K. and A. A. Tali. Kiev. Possibility of Con-  
structing a Pneumatic Regulator With Automatic Response to Load  
Changes 148

Ostryakovskiy, Yu. I. Kiev. Extremal Pneumatic Regulator,  
IAT AN SSSR 155

The basic principles of an extremal regulator for main-  
taining certain maximum or minimum values in an automated  
system are discussed. A schematic diagram is presented, and  
the construction is described. Results of laboratory testing  
are given.

## Auxiliary Equipment

Proshenko, V. S. Moscow. Automatic Installation for Compressed  
Air Supply 165  
A description is given of an installation with units of  
simple construction (rotary liquid piston compressor and  
two-stage dehydrator) for securing a continuous supply of  
clean and dry compressed air.

Report to be presented at the 1st Int'l Congress of the Int'l Federation of Automatic Control, 25 Jun-5 Jul 1960, Moscow, USSR.

AUDENIN, D. I. - "Complementing the thermo-elastic gas analysis".  
AUDENIN, M. I. - "Method of determining the optimal dynamic system according to the criterion of the functional error, which is a given function of several other functions".  
ARTSEVICH, M. A., and GUL'KINOV, S. P. - "Some problems of the theory of nonlinear systems of automatic regulation with discontinuous characteristics".  
BAGDASAR, H. A. - "Concerning the organization of the LAGRANGE function for nonlinear systems".  
BASURKIN, A. V. - "Graphical methods of synthesis of nonlinear systems of automatic regulation".  
BALATA, T. M. - "Problems of the application of high liquid pressures for automatic systems".  
BEMZUZYAN, A. E. - "The theory of stability of regulation systems".  
BERLINSKY, YU. D. - "Digital arithmetic nonlinear interpolator for programs of control of machines".  
BIRZDEKS, T. V., and ZHIL'IN, A. A. - "Parametrically stable systems".  
BIRZDEKS, T. V., and ZHIL'IN, V. I., KRAZHEVSKY, V. I., KRAZHEVSKY, V. V., MAKIN, L. V., RAYON, G. A. - "Automated electric drive of the propeller".  
BIRZDEKS, T. V., and ZHIL'IN, V. I. - "Calculation of the static icebreaker".  
BIRZDEKS, T. V., and ZHIL'IN, V. I., and PODOL'YI, S. M. - "Application of the equivalent transmission function in the calculation of follower systems by the logarithmic frequency curve method".  
BILIK, R. V., KERCHUKOV, V. A., and PRASCHINSKI, I. V. - "Quasistationary thermomechanical systems with temporary separation of elastic and plastic zones".  
BOLOTNIKOV, V. G., GAMETEZE, P. V., KICHEVSKY, Z. F., and PONTEAGUE, L. G. - "The maximum principle in the theory of optimum processes".  
BRODOV, M. M. - "Automated electric drives of a metallurgical plant".  
BURGOF, I. A. - "Automatic regulation of froth-layer processes in nonferrous metallurgy".

## TABLE I BOOK EXPLANATION

307/461

Kiev, Ukraine, house 33/3. Institute of Mathematics and Cybernetics, Seminars po

Voprosy Fiziki i Tekhnicheskoy avtomatiki, 2d and 3d session

Voprosy Fiziki i Tekhnicheskoy avtomatiki (Problems in Pneumatic and Hydraulic Automation)

Kiev, Ukraine, 1980, 211 p. Printed also in Soviet Union, 4,500 copies printed.

Res.P. Ed.: N.M. Ayzenshtat, Doctor of Technical Sciences, Professor; M. M. Pustovit, Professor

Pustovit, A.A. Tali' Tech. Ed.; S.D. Vinogradova, Doctor of Technical Sciences, Professor; M. M. Pustovit, Professor

This collection of 23 articles is intended for scientific workers, industrial

designers and engineers interested in automation and telemechanics.

CONTENTS: The collection of 23 articles is a continuation of an earlier work of the

Academy of Sciences USSR, on pneumatic and hydraulic automation systems, published in 1979. A wide range of problems connected with the design and operation

of pneumatic and hydraulic automation equipment is described. Attention is

paid to the problems of reliability of equipment, the collection also contains discussions of new

trends in the field, such as the possibility of using very low pressure for the

operation of pneumatic devices. Some articles of this collection were written in

the German Democratic Republic and in Czechoslovakia and reflect a somewhat different

approach to automation problems. No personalities are mentioned. References

## PNEUMATIC AND HYDRAULIC DEVICES AND SYSTEMS OF AUTOMATIC REGULATION

## Problems in Pneumatic Compensation Pressure and Rectification Trans-

## mitters and Rectification of Pressure

37

Auzas, R.A. and L.O. Dzhelidze, "Dynamic Characteristics of US

(Russia) multifunctional piston, ball-type Assembly Systems"

68

Vozhe, V.N., "Problems and Prospects Used in Automatic Regulation Systems

79

Developed at KAI Pneumatic Instruments

88

Zemlyuk, V.P., "Method of Increasing the Accuracy of Industrial Pneumatic

93

Instruments

105

Ulyanov, V.D., "Small Electrolic and Hydraulics Regulator

115

Boroditskii, E.P., N.G. (Nikolayev) and V. G. Kostylev, "How to Get

111

Pneumatic (Air) Multifunctional Pneumatic Assembly System - How to Get

123

Information in the Petroleum Refining Industry

123

Pneumatic Computer-Reporting and Scanning Devices

129

Tolokonnik, Yu.I., and I.M. Salnikov, "Construction Problems of Pneumatic

135

Optimizing, Testing, Service

139

Lebedeva, E.D., "Small Scale Pneumatic Continuous Action Calculating Machine

145

and the Delay Block

145

Zelenichenko, I.A., and A.I. Bratseva, "Investigation of Characteristics of

149

Pneumatic Circuits Used in Simulation,"

149

Zverevich, T.G., and A.N. Andreev, "Pneumatic Throttling Valve Diagnoses

153

Implementation of Application of Pneumatic Components

159

Aristov, V.B., Boroditskii, and V.I. Danilev, "PAP-1P Regulation

165

Mechanisms with a Pneumatic Outlet

165

Bogdanov, V.I., and K.S. Kuznetsov and V.N. Ostryakov, "Application of an

extremely Reliability Factor for Controlling and Regulating Certain Chemical

Processes According to the Thermal Effect of the Reaction

## PNEUMATIC AND HYDRAULIC AUTOMATION SYSTEMS

13

See: PNEUMATIC REGULATORS AND COMPUTERS/URSS

Bryzgalov, V. (Ed.), "Hydraulic and Combined Automatic Regulation Systems

175

Petrov, V. (Ed.), "Components of Automatic Regulators

180

Bump, I. (Ed.), "Pneumohydraulic, Pneumatic Regulators of the Kirov Plant

205

Technical Library of Congress (Turbo, 842)

Card 5/5

AC/DM/MS

27

AYZERMAN, M.A. (Moskva); GUSEV, L.A. (Moskva); ROZONOER, L.I. (Moskva);  
SMIRNOVA, I.M. (Moskva); TAL', A.A. (Moskva)

Finite automats. Part 1. Avtom.i telem. 21 no.2:224-236  
F '60. (MIRA 13:5)  
(Automatic control) (Switching theory)

7427 H A

Abstract. In Part I of this publication of the article published in *Journal of Mathematical Economics*, Vol. 21, No. 2, pp. 131-144 (1993), it was shown that the problem of determining an equilibrium operating at a delayed time  $t_1$  is equivalent to the problem of determining an equilibrium operating at a different time  $t_2$ . In particular, to Part I of the paper, it is shown that one can reduce the delayed time  $t_1$  to the first delayed time  $t_2$  by a sequence of  $\Delta$ -delay generated operations, at page 131, are continued in series as shown in FIG. 1.

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forming a delay time dependent by equations

$$\begin{aligned} \tau(0) &= t_1 - t_2 \\ \tau(t_1) &= t_2 - t_3 \\ \vdots &\quad \vdots \\ \tau(t_n) &= t_{n+1} - t_{n+2} \end{aligned}$$

The number  $\Delta$  is a positive integer. It is assumed that since  $\Delta$  is represented by the time interval  $[t_1, t_2]$  and  $t_1$  corresponds to the initial time  $t_1$ , there is an integer  $n$  such that  $t_1 + n\Delta = t_2$ . This means that the  $\Delta$ -delay associated with  $t_2$  corresponds to the  $\Delta$ -delay associated with  $t_1$ . Every  $\Delta$ -delay is denoted by the symbol  $\Delta$ . However, the preceding statement still holds at page 131, except that  $t_1$  and  $t_2$  are now defined only  $\Delta$ -delay generated operations.

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It is also shown that the delayed time  $t_1$  may be obtained, at page 131, as follows: an initial state  $\rho_0$  of the system generates a controller  $\delta(t)$  during time  $0 \leq t \leq t_1$ . The controller  $\delta(t)$  operates as an  $\Delta$ -delayed state  $\delta(t)$ . At time  $t_1$ , the initial state  $\rho_0$  changes to  $\rho_1$  and remains constant until time  $t_2$ , when it becomes a new initial state  $\rho_2$ . At time  $t_2$ , the state  $\rho_2$  changes to  $\rho_3$ . Under the assumption that the state  $\rho$  and the state  $\delta(t)$  (see page 131) are regenerated only at integer times, the controller  $\delta(t)$  is an  $\Delta$ -delayed state  $\delta(t)$  at time  $t_2$  and is replaced by the controller  $\delta(t)$  at time  $t_3$ . The procedure continues until time  $t_n$ , when the state  $\rho_n$  is denoted by  $\rho$ . The state  $\rho$  is denoted by  $\rho$  at time  $t_n$ . The state  $\rho$  is denoted by  $\rho$  at time  $t_n$ .

Card 1/4

It is also shown that the delayed time  $t_1$  may be obtained, at page 131, as follows: an initial state  $\rho_0$  of the system generates a controller  $\delta(t)$  during time  $0 \leq t \leq t_1$ . The controller  $\delta(t)$  operates as an  $\Delta$ -delayed state  $\delta(t)$ . At time  $t_1$ , the initial state  $\rho_0$  changes to  $\rho_1$  and remains constant until time  $t_2$ , when it becomes a new initial state  $\rho_2$ . At time  $t_2$ , the state  $\rho_2$  changes to  $\rho_3$ . Under the assumption that the state  $\rho$  and the state  $\delta(t)$  (see page 131) are regenerated only at integer times, the controller  $\delta(t)$  is an  $\Delta$ -delayed state  $\delta(t)$  at time  $t_2$  and is replaced by the controller  $\delta(t)$  at time  $t_3$ . The procedure continues until time  $t_n$ , when the state  $\rho_n$  is denoted by  $\rho$ . The state  $\rho$  is denoted by  $\rho$  at time  $t_n$ . The state  $\rho$  is denoted by  $\rho$  at time  $t_n$ .

169500 (1024, 03/11/32)

S/01/9824/012/007

B0778624

ATTACHED  
Kleemann, K. A. [Signature]  
Birchmore, H. M. [Signature]

TYPE: Methods of working out a Plan for the  
development of the area from the  
present to the future.

PERSPECTIVE: Long-term perspectives.

DATE: 1960, Oct 22, 1960.

CHARACTER: Description of anticipated  
changes in the environment which may occur  
in the area over a period of time.

ADDITIONAL INFORMATION: The information attached to subsections 10 and 11  
should be used as background information for developing a perspective.  
The input state at the time of the analysis will be used as the starting point.  
It is shown that this analysis is essentially a projection of what may happen  
in the possible future. It is also possible to project a situation in which  
any phase of the analysis, or part of it, proves to be false.  
There are a number of factors which can influence the development of the area.

SOURCES: None

88818

S/103/61/022/001/010/012  
B019/B056

9.7200

AUTHORS: Berezovets, G. T., Dmitriyev, V. N., Tal', A. A. (Moscow)

TITLE: A New System for Pneumatic Computers. I

PERIODICAL: Avtomatika i telemekhanika, 1961, Vol. 22, No. 1, pp. 111-118

TEXT: The authors studied methods of designing pneumatic analog computers, in which pneumatic amplifiers are used, which operate at pressures of from 0 - 100 mm water column, an idea originated by the German engineer V. Ferner. The first part deals with carrying out linear algebraic operations by means of such a computer. The development of exact pneumatic computers is, in general, rendered difficult by the fact that within the usual pressure range of from 0 - 1 atm excess pressure between input and output pressure, the throttling characteristics are not linear. Two new principles for avoiding these difficulties are given. The first principle is the construction of the pneumoautomatic of all control and computing devices on the basis of a standard element, the operational amplifier. This offers special constructional advantages. The second new principle is the use of pressures between 0 - 100 mm water column. This

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A New System for Pneumatic Computers. I

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B019/B056

low pressure causes no deterioration of the dynamic characteristic of the devices, it is possible to produce linear throttles, and the air consumption is considerably lower. The system of pneumatic computers described here consists of standardized elements, which may be divided into two groups. The first group consists of the pneumatic computer proper, and the second of the throttles and similar elements. Fig.1 shows the basic scheme of a pneumatic computing device, its entire view, the static characteristic, and the principal circuit. In the entire system, three types of throttles are used: 1) Constant linear (laminar) throttles. 2) Constant quadratic (turbulent) throttles. 3) Linear control throttles. In order to be able to carry out any linear algebraic operations with pneumatic devices, it is necessary to be able to represent

functions of the form  $P = \sum_{i=1}^n k_i P_i$  ( $-\infty < k_i < +\infty$ ) (2) by means of general methods. Here,  $P_i$  are pneumatic input signals and  $P$  the output pressure. In the following, three methods for solving this problem are dealt with in detail. 1) Fig.2 shows the scheme of a non-compensating throttle summator. The above considerations show a limited applicability

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A New System for Pneumatic Computers. I

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B019/B056

of such a summator. 2) Fig.3 shows a compensating throttle summator, by means of which any arbitrary algebraic function may be represented. Fig.4 shows a scheme by means of which any arbitrary algebraic operation may be carried out, and which exists of two throttle summators shown in Fig.3. 3) Fig.6 shows a second type of a compensating throttle summator, which differs from the first type by the fact that the chamber of the computing amplifier of a non-compensating throttle summator is connected with m inputs. A study of this summator shows that, unlike the previously studied ones, every algebraic operation may be carried out with only one computing amplifier. The second part will deal with the construction of integrators and differentiators and with devices for carrying out nonlinear operations. There are 9 figures and 7 Soviet references.

SUBMITTED: July 24, 1960

Legend to Fig.1: 1) Body, 2) membrane block; M) membranes, 3) nozzle,  
3) ejector throttle.

Card 3/6

Tel/ A A.

U.S.C.G.

7770  
DDV/ICB-21-2-6/14

AUTHORS: Ayzenman, M. A., Gusev, L. A., Rabinovici, L. I.,  
Smirnova, I. M., Tikhonov, A. A.

TITLE: Finite Automata. I

PERIODICAL: Avtomaty i telemekhanika, Moscow, Vol 12, No 4, pp  
224-36 (1967)

ABSTRACT: The authors give their point of view on the theory of finite automata. A finite automaton is defined as a dynamical system which at certain discrete moments satisfies the following conditions: (1) The state of the system is selected from a finite number  $N$  of possible states; (2) The state of the input to the system is selected from a finite number  $M$  of possible input states; (3) The state of the system at any considered moment is defined unambiguously by the state of the system and the state of the input at the preceding moment. The following designations are introduced: (a)  $P$  -  $P(N, M)$  is a system of  $N$  possible systems

Card 1/12

AYZERMAN, M.A. (Moskva); GUSEV, L.A. (Moskva); ROZONCER, L.I. (Moskva)  
SNIRNOVA, I.Y. (Moskva); TAL', A.A. (Moskva)

Algorithmic insolvability of a problem on the recognition of the  
representability of recursive events in finite automata.  
Avtom. i telem. 22 no. 6:748-755 Je '61. (MIRA 14:7)  
(Automatic control)

AYZERMAN, M. A. (Moskva); GUSEV, L. A. (Moskva); ROZONOER, L. I. (Moskva);  
SMIRNOVA, I. M. (Moskva); TAL', A. A. (Moskva)

Conversion of the time pace of sequential machines and synthesis  
of switching circuits. Avtom. i telem. 23 no.11:1465-1491  
(MIRA 15:10)  
N '62.

(Electric relays) (Switching theory)  
(Automatic control)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

LAL, A. A.

"Realization of Sequential Machines by Pneumatic Means."

Paper to be presented at the IFAC Congress, to be held in  
Basel, Switzerland, 27 Aug to 1 Sep 63.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

AYZENMAN, Mark Aronovich; GUSEV, Leonid Alekseyevich; ROZONOER,  
Lev Il'ich; SHIROKOVA, Irina Mikhaylovna; TAL', Aleksey  
Alekseyevich; KONOLEV, N.A., red.; MURASHOVA, N.Ya.  
tekhn. red.

[Logic. Automata. Algorithms] Logika. Avtomaty. Algoritmy.  
(MIRA 17:3)  
Moskva, Fizmatgiz, 1963. 556 p.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

BERENDS, T.K.; YEFREMOVA, T.K.; TAGAYEVSKAYA, A.A.; TAL', A.A.

Principle of universal elements in pneumatic control systems.  
Priborostroenie no.11:3-8 N '63. (MIRA 16:12)

ACCESSION NR: AT4042433

AUTHOR: Berends, T. K.; Tagayevskaya, A. A.; Tal', A. A.

TITLE: Structural elements of pneumoautomatic devices and systems

SOURCE: Vsesoyuznoye soveshchaniye po pnevmo-gidravlicheskoy avtomatike. 5th, Leningrad, 1962. Pnevmo- i gidroavtomatika (Pneumatic and hydraulic control); materialy\* soveshchaniya. Moscow. Izd-vo Nauka. 1964., 5-20

TOPIC TAGS: automation, automatic control system, pneumatic system, pneumatic relay, pneumatic amplifier, pneumatic switch, pneumatic resistance, pneumatic capacitance,

ABSTRACT: Pneumatic devices have become fundamental tools in the automation of many sections of industry, such as the chemical, petroleum refining, gas, metalurgical, and lumber industries. This paper is essentially a survey of the components and assemblies of pneumatic devices. The authors point out that the logical functions required in automatic control systems can be accomplished by the devices of the USEPPA (Universal System of Elements for Production Pneumo-Automation) in which each new device is created by combining various universal pneumatic elements

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OTHER: 001

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

Argentinean synthetic multi-national answer to the  
Argentina of the fifties. In English language. (Argen-  
tina. 26 May 1962. pp 1-6) (VIA 75-6)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

ZALMANZON, L.A., kand. tekhn. nauk; TAL', A.A., kand. tekhn. nauk

New applications of pneumatic control. Vest. AN SSSR 33 no.10:  
58-62 O '63. (MIRA 16:11)

1. Institut avtomatiki i telemekhaniki Gosudarstvennogo komiteta  
po priborostroyeniyu, sredstvam avtomatizatsii i sistemam  
upravleniya pri Gosplane SSSR i Akademii nauk SSSR.

AVEN, O.A.; DVORETSKIY, V.M.; DOMANITSKIY, S.M.; ZALMANZON, L.A.;  
KRASSOV, I.M.; KRUG, Ye.K.; TAL', A.A.; KHOKHLOV, V.A.;  
BULGAKOV, A.A.; DEMIDENKO, Ye.D.; BERNSHTEYN, S.I.; YEMEL'YANOV,  
S.V.; LERNER, A.Ya.; MEYEROV, M.V.; PEREL'MAN, I.I., FITSNER,  
L.N.; CHELYUSTKIN, A.B.; ZHOZHIKASHVILI, V.A.; IL'IN, V.A.;  
AGEYKIN, D.I.; GUSHCHIN, Yu.V.; KATYS, G.P.; MEL'TTSEV, L.V.;  
PARKHOMENKO, P.P.; MIKHAYLOV, N.N.; FITSNER, L.N.; PARKHOMENKO,  
P.P.; ROZENBLAT, M.A.; SOTSKOV, B.S.; VASIL'YEVA, N.P.; PRANGISHVILI,  
I.V.; POLONNIKOV, D.Ye.; VOROB'YEVA, T.M.; DEKABRUN, I.Ye.

Work on the development of systems and principles of automatic  
control at the Institute of Automatic and Remote Control  
during 1939-1964. Avtom. i telem. 25 no. 6:807-851 Je '64.  
(MIRA 17:7)

ACCESSION NR: AP4041469

is how a "customer" can describe to the "designer" the set of tapes which is to be realized in the desired machine. An algorithm for synthesizing a diagram of states is suggested which is characterized by: (1) No specifications are expected from the customer; (2) The necessary information is obtained from him in the course of developing the algorithm; (3) The designer asks only two standard types of questions: (a) those regarding the "tapes" and (b) those regarding the "tree." Three examples presented in the article illustrate the algorithm. Nine rules, each including a series of operations, and a logical diagram define the details of the algorithm. Orig. art. has: 4 figures and 18 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: DP , IE

NO REF SOV: 005

OTHER: 001

Card 2/2

L 44738-5; EWP(k)/EWP(h)/EWT(d)/EWP(l)/EWP(v) Pf-4/Pg-4/Pk-4/P1-4/  
Po-4/Pq-4/Pae-2 IJP(c) BC S/0103/65/026/003/0510/0520

ACCESSION NR: AP5008324

AUTHOR: Gusev, L. A. (Moscow); Tal', A. A. (Moscow)

TITLE: Setting up algorithms for the abstract synthesis of sequential machines  
in a questionnaire language

SOURCE: Avtomatika i telemekhanika, v. 26, no. 3, 1965, 510-520

TOPIC TAGS: sequential machine, questionnaire language, automatic control,  
automatic control system, automatic control design, automatic control theory

ABSTRACT: Possibility is considered of realization of an abstract synthesis of  
sequential machines on the basis of replies to a finite number of questions of  
these two types: (1) Whether or not the "tape" is admissible; (2) Whether or not  
the "tree" is admissible. The "tape" is a sequence of symbols taken from the  
alphabet {s} of external situations; the "tree" is a branching combination of  
tapes. The method used is an outgrowth of D. A. Huffman's method (J. Franklin  
Inst., v. 257, nos. 3-4, 1954). It is proven that the abstract synthesis:  
(1) Not always can be realized on the basis of replies to the question regarding  
finite-length tapes; (2) Can always be realized if the questions cover finite-  
height trees; a corresponding "basic" algorithm of the questionnaire language is

Card 1/2

53

B

L 44738-65

ACCESSION NR: AP5008324

developed. Orig. art. has: 2 figures, 1 formula, and 4 tables.

ASSOCIATION: none

SUBMITTED: 07Sep64

ENCL: 00

SUB CODE: DP, IE

NO REF SOV: 004

OTHER: 005

B J B  
Card 2/2

L 24340-66 EEC(k)-2/EWT(d)/EWT(1)/EWP(v)/EWP(k)/EWP(h)/EWP(l)/EWA(h)  
ACCESSION NR: AT6005899 SOURCE CODE: UR/0000/65/000/000/0049/0053  
IJP(c) BC/GS

AUTHOR: Ayzerman, M. A.; Tal', A. A.

ORG: None

62

B71

TITLE: New developments in pneumatic automation 9

SOURCE: International Federation of Automatic Control. International Congress. 2d, Basel, 1963. Tekhnicheskiye sredstva avtomatiki (Technical means of automation); trudy kongressa. Moscow, Izd-vo Nauka, 1965, 49-53

TOPIC TAGS: pneumatic control, pneumatic control system, automatic pneumatic control, automatic control theory

ABSTRACT: The author discusses new developments in pneumatic automation, stressing the breakthrough achieved recently. This breakthrough puts pneumatic automation on a new plane in the range of operating frequencies, ease of selection and assembly of various circuits, and opportunity of satisfying all the growing needs of industry. Three technical ideas are the basis of this breakthrough: 1) the application of low working pressure; 2) the design of pneumatic automatic devices and systems from unified components which use "printed" circuits; and 3) the design of pneumatic devices which use the effects of the direct interaction of flow (without any intermediate or elastic components) with the

2

Card 1/2

L 24340-66  
ACCESSION NR: AT6005899

application of the printed circuit technique. Each idea is discussed briefly. The brief review presented shows that the three technical ideas examined have radically changed the opportunities available to pneumatic automation and its role in the general aspect of the development of automation. As a result of high reliability, fire and explosion safety, simplicity, and low cost, as well as low sensitivity to the changes occurring in the surroundings (particularly the temperature), pneumatics is a valuable supplement, and sometimes a replacement, for electronics in all fields requiring higher standards in rapid response and long distances. Orig. art. has: 4 figures.

SUB CODE: 13/ SUBM DATE: 23June65/ ORIG REF: 006/ OTH REF: 004

Card 2/2 RB

L 243k2-66 EWT(d)/EAT(1)/SEC(k)-2/EWP(v)/EWP(k)/EWP(h)/EWP(1)/EWA(h) IJP(c)  
ACCESSION NR: AT6005901 GS/SC SOURCE CODE: UR/0000/65/000/000/0110/0130

AUTHOR: Tal', A. A.

64  
BT/

ORG: None

TITLE: The realization of sequential machines by means of pneumatic automation<sup>14</sup>

SOURCE: International Federation of Automatic Control. International Congress.  
2d, Basel, 1963. Tekhnicheskiye sredstva avtomatiki (Technical means of automation); trudy kongressa. Moscow, Izd-vo Nauka, 1965, 110-130

TOPIC TAGS: automatic pneumatic control, pneumatic control system, algebraic logic, logic element

ABSTRACT: This article contains a brief description of the apparatus used for the realization of pneumatic relays.<sup>15</sup> It is shown how, by means of this equipment, elementary algebraic logic operations and logic converters (single cycle relays) of any complexity are realized. The problem of the construction of multi-cycle relays is formulated in terms of the theory of finite automata using the concept of "sequential machine." It is shown how an elementary time logic function (time delay) is realized. A description is given of three methods for the realization of sequential asynchronous machines, based on the use of logic converters and

Card 1/2

L 24342-66

ACCESSION NR: AT6005901

delays. The aim of this work is to show how, by means of this equipment (pneumatic relays, "or" cells, and, perhaps, pneumatic impedances), elements can be organized which fulfill the delay operation, and how these elements should be combined with logic converters for the realization of sequential machines. The methods presented when used on nonhydraulic technical devices undergo alterations only on the last stage (starting from coding), but are completely valid in all the remaining aspects. Orig. art. has: 15 figures, 20 tables, and 7 formulas.

SUB CODE: 13, 09 / SUBM DATE: 23Jun65 / ORIG REF: 004

Card 2/2

ACC NR: AP60-243

SOURCE: COL: UR/Russia/19/333/100/100/000

AUTHORS: Kalandarishvili, N. G. (Moscow); Tal', A. A. (Moscow)

ORG: none

TITLE: On varieties of sequential computers

SOURCE: Avtomatika i telomekhanika, no. 8, 1966, 93-108

TOPIC TAGS: computer, computer memory, algorithm, function, set theory, magnetic tape, mathematic matrix

ABSTRACT: This paper describes a family of minimal sequential computers and a sequential computer with an absolutely minimal internal memory and a minimal external memory. Sequential computers are defined by setting in their description

$$\begin{aligned}x &= K(x', \rho), \\ \lambda &= L(x', \rho),\end{aligned}$$

the jump and output functions  $K$  and  $L$ , where  $\rho$ ,  $\lambda$ , and  $X$  are variables that determine the states of the input and output and the internal state and that take values of finite alphabets; and  $X'$  is a variable connected with  $X$  by the relation  $X'[t] = X[t - 1]$ . Time  $t$  is discrete. In this description, the present internal state is determined by the past internal state and the past state of the input. For some sequential computers, a shifted output function  $\lambda = L^*(X, \rho)$  can be set up

UDC: 62-50

Card 1/4

ACC NR: AP6029548

without changing the alphabet. In this case, the present internal state is determined by the past internal state and the present state of the input:

$$x(t) = K\{x(t-1), p[t]\}, \quad \lambda = L^*\{x, p\}.$$

Depending upon the singularities of the past-past description and whether or not there exists a past-present description for the sequential computer in question, eight varieties of sequential computers can be distinguished (see Fig. 1). Tables of extensions are given (see Fig. 2). Design algorithms are also provided for the sequential computers discussed.

Card 2/4

ACC-NR: AP6029548

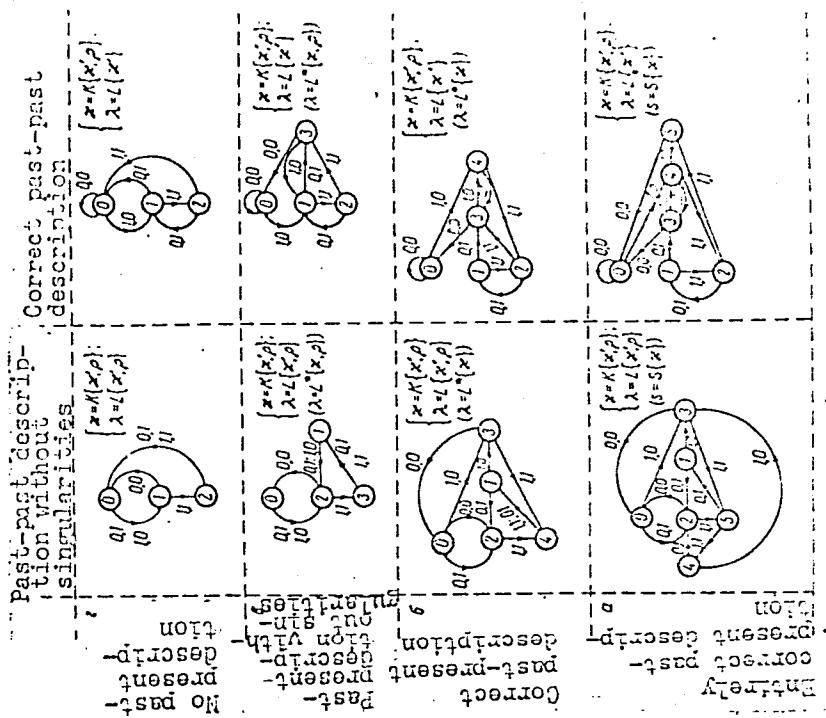


Fig. 1.

Card 3/4

ACC NR: AP6032428

SOURCE CODE: UR/0103/66/000/009/0077/0107

AUTHOR: Tal', A. A. (Moscow)

ORG: none

TITLE: Possibilities arising from a structural synthesis of asynchronous sequential machines

SOURCE: Avtomatika i telemekhanika, no. 9, 1966, 77-107

TOPIC TAGS: automatic control system, automatic control R and D, sequential machine

ABSTRACT: The problem of synthesizing static asynchronous sequential machines (ASM) with specified static properties is considered. The internal state of the machine changes only at discrete moments of time. The output state may change either with clock-period start or at the moment of input change. The clock-change moments depend either on the clock period or on the input-state change. Only

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UDC: 62-50

ACC NR: AP6032428

types 00, 01, 10, 11 of ASM are considered (E. I. McCluskey, Inf. and Control, v. 6, no. 2, 1963). Pairs of models  $\tilde{H}$  and  $\bar{H}$ ,  $\tilde{h}$  and  $\bar{h}$ ,  $\tilde{G}$  and  $\bar{G}$  are the extremes in the S-machine classes H, h and G. A tilde-marked model yields a minimum number of symbols in the  $\{\alpha\}$ -alphabet; an upper-bar-marked model results in such an  $\{\beta\}$ -alphabet which makes  $\{\alpha\}$ - and  $\{\beta\}$ -alphabet empty. Other S-machines of the same class have, generally, nonempty alphabets  $\{\alpha\}$  and  $\{\beta\}$ , with a nonminimal  $\{\gamma\}$ -alphabet. Among them, an ASM can occur for which the  $\{\alpha\}$ -alphabet is nonempty but the  $\{\beta\}$ -alphabet is empty ( $\tilde{H}$ ,  $\tilde{h}$ ,  $\tilde{G}$ ). The  $\bar{H}$ -model was examined by E. G. Eichelberger ("Switching Circuit Theory," IEEE, 1963). The ASM is made up from natural delays in  $\lambda - \lambda'$ ,  $\gamma - \gamma'$ ,  $\beta - \beta'$ ,  $\alpha - \alpha'$  channels and logic transducers K, L, A, B. Hints on using H, h, G models to minimize the number of amplifiers in practical relay-contact networks are offered. Orig. art. has: 16 figures and 28 formulas.

SUB CODE: 13, 09 / SUBM DATE: 11Apr66 / ORIG REF: 005 / OTH REF: 005

Card 2/2

KHANDROS, B.; TAL', I.

On a visit to an Academician. Znan.ta pratsia no.9:9-10 S '59.  
(MIRA 13:1)

1. Spetsial'nyye korrespondenty zhurnala "Znannya ta pratsya."  
Leningrad. (Joffe, Abram Fedorovich, 1880-)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

July, 1958.

tel", M.R. "On the norms of protection, concrete and reinforced concrete construction, to include, in the relevant working regulations", Soviet. prints', 1958, N. 11-14.

(S: 4-30.2, al karantin', vveden' v tsirkul', No. 1, 1949)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

TAL', K.E., kand.tekhn.nauk

Norms for designing plain and reinforced concrete construction  
elements included in Building Regulations. Stroi.prom. 27  
no.2:16-19 F '49. (MIRA 13:2)  
(Reinforced concrete construction--Contracts and specifications)

GOL'DENBLAT, I., doktor tekhn.nauk; TAL', K., kand.tekhn.nauk;  
BULGAKOV, V., kand.tekhn.nauk; BORISHANSKIY, M., kand.tekhn.  
nauk; VASIL'YEV, A., kand.tekhn.nauk; TURKIN, V., kand.tekhn.  
nauk.; NEMIROVSKIY, Ya., kand.tekhn.nauk; MAKARICHEV, V..  
kand.tekhn.nauk.

Rude attempt to misappropriate achievements of the Soviet  
art of building. Stroi.prom. 27 no.10:18-19 O '49.  
(MIRA 13:2)

(Reinforced concrete construction)  
(Strains and stresses)

Milt, W. S.

Reinforced Concrete Construction

Selecting the type of concrete suitable for reinforced concrete construction. Stroi. prom. 20, No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952 Uncl.

STRELETSKIY, N.S., professor, doktor tekhnicheskikh nauk; KELDYSH, V.M., professor, doktor tekhnicheskikh nauk; GVOZDEV, A.A., professor, laureat Stalinskoy premii, doktor tekhnicheskikh nauk; ONISHCHIK, L.I., professor, doktor tekhnicheskikh nauk; GOL'DENBLAT, I.I., doktor tekhnicheskikh nauk; KARTASHOV, K.N., kandidat tekhnicheskikh nauk; BALDIN, V.A., kandidat tekhnicheskikh nauk; TAL', K.E., kandidat tekhnicheskikh nauk.

Discussion of the problem of building calculations using the method of limiting states. Stroi.prom. 32 no.4:41-42 Ap '54. (MLRA 7:5)

1. Chlen-korrespondent Akademii nauk, deyствител'nyy chlen Akademii arkhitektury (for Streletskiy). 2. Vitse-prezident Akademii arkhitektury (for Keldysh). 3. Chlen-korrespondent Akademii arkhitektury (for Gvozdev). 4. Chlen-korrespondent Akademii arkhitektury (for Onishchik). (Building--Tables, calculations, etc.) (Reinforced concrete construction)

TAL', K.E., kandidat tekhnicheskikh nauk.

Some problems of planning and installing prefabricated reinforced concrete construction. Stroi.prom. 32 no.6:27-29 Je '54. (MLRA 7:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut promyshlennykh sooruzheniy. (Precast concrete construction)

SOV-1.3-57 8-9780

Translation from Referativnyy zhurnal Mekhanika, 1957, Nr 8, p 163 (USSR)

AUTHOR: Tal K E

TITLE: On the Compressive Deformation of Concrete (O deformativnosti betona pri szhatii)

PERIODICAL: V sb.: Issledovaniye prochnosti, plastichnosti i polzuchesti stroy. materialov. Moscow, 1955, pp 202-207

ABSTRACT: The author submits the results of tests of axial compression conducted on reinforced and nonreinforced (concrete) prisms. The concrete used was of 105 kg/cm<sup>2</sup> prism strength and the reinforcement was of cold-drawn wire with a nominal yield point of 5000 kg/cm<sup>2</sup> in compression. The values of the mean maximum strains amounted to  $\sim 2 \times 10^{-3}$  for nonreinforced prisms and to twice as much, i.e.,  $\sim 4 \times 10^{-3}$ , for the reinforced ones. The author submits stress diagrams for concrete and reinforcements; the stress in the reinforced prisms attained its maximum with strains of  $\sim 1.2 \times 10^{-3}$  and with 80% of the maximum load. With a further increase in the load the stress in the concrete decreased owing to its redistribution to the reinforcement, while the strains increased sharply. Because of

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SOV/124-57-8-9780

• On the Compressive Deformation of Concrete

technical difficulties it is not usually possible to observe during tests the phenomenon of a significant increase in the plastic deformations of compressed concrete which accompanies a decrease in the compressive stresses. In the experiments under review the above phenomenon turned out to be a forced one. The results obtained from the present experimental investigation once again emphasize the fact that the deformation of concrete depends on the conditions under which the concrete is working.

A. Ye. Desov

Card 2 / 2

TAL', K.E., kandidat tekhnicheskikh nauk.

New norms and specifications for designing plain and reinforced concrete construction elements. Bet.i zhel.-bet. no.3:97-103 Je '55. (Reinforced concrete) (MLRA 9:1)

TAL', K.E., kand.tekhn.nauk, nauchnyy red.; BERDICHEVSKIY, G.I., nauchnyy  
red.; KOTIK, V.A., red. izd-va; EL'KINA, E.M., tekhn.red.

[Theory of analysing and designing reinforced concrete construction  
elements; collection of articles] Teoriia rascheta i konstruiro-  
vaniia zhelezobetonnykh konstruktsii; sbornik statei. Meskva,  
Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1958.  
212 p.

(MIRA 12:1)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy promyshlennosti  
SSSR.

(Reinforced concrete)

TAL' K E  
TABENKIN, N.L., inzh.; TAL', K.M., kand.tekhn.nauk; TEMKIN, L.Ye., inzh.,  
nauchnyy red.; GORYACHEVA, T.V., red.izd-va; TOKER, A.M., tekhn.  
red.

[Examples of the calculation of reinforced concrete elements]  
Primery racheta elementov zhelezobetonnykh konstruktsii. Moskva,  
Gos. izd-vo lit-ry po stroit. i arkhit., 1958. 252 p. (MIRA 11:5)  
(Reinforced concrete construction)

MURASHEV, V.A., prof., doktor tekhn.nauk; MIRONOV, S.A., prof., doktor tekhn.nauk; ALEKSANDROVSKIY, S.V., kand.tekhn.nauk; TAL', K.E., kand.tekhn.nauk; DMITRIYEV, S.A., kand.tekhn.nauk; MULIN, N.M., kand.tekhn.nauk; SIGALOV, E.Ye., kand.tekhn.nauk; NEMIROVSKIY, Ya.M., kand.tekhn.nauk; TABENKIN, N.L., inzh. [deceased]; KALATUROV, B.A., kand.tekhn.nauk; BRAUDE, Z.I., inzh.; KRYLOV, S.M., kand.tekhn.nauk; FOKIN, K.F., doktor tekhn.nauk; GUSEV, N.M., prof., doktor tekhn.nauk; YAKOVLEV, A.I., inzh.; KORENEV, B.G., prof., doktor tekhn.nauk; DERESHKOVICH, Yu.V., inzh.; MOSKVIN, V.M.; LUR'YE, L.L., inzh.; MAKARICHEV, V.V., kand.tekhn.nauk; SHEVCHENKO, V.A., inzh.; VASIL'YEV, B.F., inzh.; KOSTYUKOVSKIY, M.G., kand.tekhn.nauk; MAGARIK, I.L., inzh.; IL'YASHEVSKIY, Ya.A., inzh.; LARIKOV, A.F., inzh.; STULOV, T.T., inzh.; TRUSOV, L.P., inzh.; LYUDKOVSKIY, I.G., kand.tekhn.nauk; POPOV, A.N., kand.tekhn.nauk; VINOGRADOV, N.M., inzh.; USHAKOV, N.A., kand.tekhn.nauk; SVERDLOV, P.M., inzh.; TER-OVANESOV, G.S., inzh.; GLADKOV, B.N., kand.tekhn.nauk; KOSTOCHKINA, G.V., arkh.; KUREK, N.M.; OSTROVSKIY, M.V., kand.tekhn.nauk; PEREL'SHTEYN, Z.M., inzh.; BUKSHTEYN, D.I., inzh.; (Continued on next card)

MURASHEV, V.A.--(continued) Card 2.  
MIKHAYLOV, V.G., kand.tekhn.nauk; SIGALOV, E.Ye., kand.tekhn.nauk;  
GVOZDEV, A.A., prof., retsenzent; MIKHAYLOV, T.V., prof., retsen-  
zent; PASTERNAK, P.L., prof., retsenzent; SHUBIN, K.A., inzh.,  
retsenzent; TEMKIN, L.Ye., inzh., nauchnyy red.; KOTIK, B.A., red.  
retsenzent; GORYACHEVA, T.V., red.izd-va; MEDVEDEV, L.Ya., tekhn.red.  
izd-va;

[Handbook for designers] Spravochnik proektirovshchika. Pod ob-  
shchei red. V.I.Murasheva. Moskva, Gos.izd-vo lit-ry po stroit..  
arkhit. i stroit.materialam. Vol.5. [Precast reinforced concrete  
construction elements] Sbornye zhelezobetonnye konstruktsii.  
1959. 603 p.

(MIRA 12:12)

1. Akademiya stroitel'stva i arkhitektury SSSR. Nauchno-issledo-  
vatel'skiy institut betona i zhelezobetona, Perovo. 2. Deystvitel'-  
nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Murashev,  
Gvozdev, Mikhaylov, V.V., Pasternak, Shubin). 3. Chlen-korresp. Aka-  
demii stroitel'stva i arkhitektury SSSR (for Mironov, Gusev, Moskvin,  
Kurek).  
(Precast concrete construction)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

TAL', K.E.

International conference on designing construction elements. Stroi.  
mekh. i rasch. soor. no.1:3 of cover '59. (MIBA 12:7)  
(Structures, Theory of--Congresses)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

TEMKIN, L.Ye., inzh., nauchn. red.; OVSYANKIN, V.I., red.; STRELETSKIY, N.S., prof., red.; GVOZDEV, A.A., prof., red.; IVANOV, Yu.M., red.; SEMENTSOV, S.A., kand. tekhn. nauk, red.; GALKIN, Ya.G., red.; KRASIL'NIKOV, P.A., red.; MURASHEV, V.I., red. [deceased]; NIKITIN, N.V., red.; TAL', K.E., kand. tekhn. nauk, red.; VILKOV, G.N., red. izd-va; GARNUKHIN, Ye.K., tekhn. red.

[Papers from the International Conference on Designing Building Elements] Materialy Mezhdunarodnogo soveshchaniia po raschetu stroitel'nykh konstruktsii. Moscow, 1958. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 258 p. (MIRA 14:7)

1. Mezhdunarodnoye soveshchaniye po raschetu stroitel'nykh konstruktsiy. Moscow, 1958. 2. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Streletskiy, Gvozdev). 3. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Sementsov, Tal')  
(Building)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

TAL', K.S., kand.tekhn.nauk

International conference on the design of construction elements.  
Bet. i zhel.-bet. no.1:47 Ja '61. (M.I.A 14:2)  
(Precast concrete construction)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

TAL', K.E., kand.tekhn.nauk

Some problems in establishing norms for the strength of concrete.  
(MIFPA 14:5)  
Bet. i zhel.-bet. no. 3:126-129 Mr '61.  
(Concrete)

TAL', K.E., kand.tekhn.nauk; CHISTYAKOV, Ye.A., kand.tekhn.nauk

Study of the bearing capacity of bent reinforced-concrete columns  
functioning according to the first case of eccentric compression.  
Trudy NIIZHB no.23:127-195 '61. (MIRA 14:12)  
(Columns, Concrete)

FRENKEL', I.M., kand. tekhn. nauk; MINONOV, S.A., doktor tekhn. nauk, prof.; BARANOV, A.T., kand. tekhn. nauk; SUZHEVICH, G.A., kand. tekhn. nauk; MIKHAYLOV, K.V., kand. tekhn. nauk; MULIN, N.M., kand. tekhn. nauk; KHAYLUKOV, G.K., kand. tekhn. nauk; KORNEV, N.A., kand. tekhn. nauk; TESLER, F.A., kand. tekhn. nauk; HERDICHESKIY, G.I., kand. tekhn. nauk; VASIL'YEV, A.P., kand. tekhn. nauk; LYUDKOVSKIY, I.G., kand. tekhn. nauk; SVETOV, A.A., kand. tekhn. nauk; CHINENKOV, Yu.V., kand. tekhn. nauk; BELOBROVYY, K., inzh.; KLEVTSOV, V.A., inzh.; DOBROMYSLOV, N.S., arkh.; DESOV, A.Ye., doktor tekhn. nauk, prof.; LITVER, S.L., kand. tekhn. nauk; PISHCHIK, M.A., inzh.; SKILYAR, B.L., inzh.; POPOV, A.P., kand. tekhn. nauk; NEKRASOV, K.D., doktor tekhn. nauk, prof.; MILOVANOV, A.F., kand. tekhn. nauk; TAL', K.E., kand. tekhn. nauk; KALATUKOV, B.A., kand. tekhn. nauk; KARTASHOV, K.N., red.; MAKARICHEV, V.V., kand. tekhn. nauk, red.; YAKUSHEV, A.A., inzh., nauchnyy red.; BEGA, B.A., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Reinforced concrete products; present state and prospects for development] Zhelezobetonnye konstruktsii; sostoianie i perspektivy razvitiia. Pod obshchei red. K.N. Kartashova i V.V. Makaricheva. Moskva, Gosstroizdat, 1962. 279 p.

(MIRA 15:S)

(Continued on next card)

FRENKEL', I.M.---(continued) Card 2.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Kartashov). 3. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Mironov). 4. Gosudarstvennyy institut tipovogo proyektirovaniya i tekhnicheskikh issledovaniy (for Berdichevskiy, Vasil'yev, Lyudkovskiy, Svetov, Chinenkov, Belobrovyy, Klevtsov, Dobromyslov). 4. Vsesoyuznyy gosudarstvennyy proyektno-konstruktorskiy institut (for Desov, Litver, Pishchik).

(Precast concrete)

TAL', K.E., kand.tekhn.nauk; CHISTYAKOV, Ye.A., kand.tekhn.nauk;  
KOLOMENSKIY, A.P., inzh.

Unit for testing flexible columns with protracted loading. Trudy  
NIIZHB no.26:21-29 '62. (MIRA 15:7)  
(Columns, Concrete--Testing)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

TAL', K.E., kand.tekhn.nauk; CHISTYAKOV, Ye.A., kand.tekhn.nauk

Experimental study of flexible reinforced concrete rods under protracted loading. Trudy NIIZhB no.26:30-58 '62. (MIRA 15:7)  
(Columns, Concrete--Testing)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

ГАЛ', К.Е., канд.техн.наук

Ways to further improve the basic parameters of the margin of  
reliability of structures. Izv.ASiA 4 no.4:64-72 '62.  
(MIRA 16:1)  
(Strength of materials)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

TAL', K.E., kand. tekhn. nauk; LESSIG, N.N., kand. tekhn. nauk; Prinimali  
uchastiye: GVOZDEV, A.A.; ALEKSANDROVSKIY, S.V.; BORISHANSKIY,  
M.S.; DMITRIYEV, S.A.; KRILOV, S.M.; MIKHAYLOV, K.V.; MULIN, N.M.;  
NEMIROVSKIY, Ya.M.; CHISTYAKOV, Ye.A.; VASIL'YEV, B.F.; BOGATKIN,  
I.L.; ZALESOV, A.S.; NIKITIN, I.K.

New standards SNiP II-V. 1-62 for the design of concrete and  
reinforced concrete elements. Bet. i zhel.-bet. 9 no. 3:97-102  
Mr. '63. (MIRA 16:4)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona  
Akademii stroitel'stva i arkhitektury SSSR (for all except  
Vasil'yev, Bogatkin, Zalesov, Nikitin). 2. Gosudarstvennyy  
institut tipovogo proyektirovaniya i tekhnicheskikh issledovaniy  
(for Vasil'yev, Bogatkin, Zalesov, Nikitin).

KORNAKOV, A.M., kandidat tekhnicheskikh nauk; TAL', K.K., kandidat tekhnicheskikh nauk.

Efficient designs for one-way classification yards. Zhel.dor.transp.  
37 no.11:49-52 N '55. (MLRA 9:2)  
(Railroads--Switching)

TAL', K.K., kandidat tekhnicheskikh nauk.

Increasing the traffic capacity of station neck. Vest. TSNII  
MPS 15 no.4:48-51 D '56. (MLRA 10:2)

1. Institut kompleksnykh transportnykh problem Akademii nauk  
SSSR.  
(Railroads--Station service)

ZEMBLINOV, S.V., professor, doktor tekhnicheskikh nauk; AKSENOV, I.Ya.,  
kandidat tekhnicheskikh nauk; POLYAKOV, A.A., kandidat tekhnicheskikh  
nauk; TAL', K.K., kandidat tekhnicheskikh nauk.

More on the construction of railroad lines in the Moscow rail  
system. Zhel. dor. transp. 38 no.8:41-45 Ag '56. (MLRA 9:10)

(Moscow--Railroads)

ZEMBLINOV, S.V., prof., doktor tekhn.nauk; BURAKOV, V.A., inzh.;  
OBERMEISTER, A.M., mladshiy nauchnyy sotrudnik; POLYAKOV, A.A.,  
doktor tekhn.nauk, starshiy nauchnyy sotrudnik; PERSIANOV, V.A.,  
mladshiy nauchnyy sotrudnik; TAL', K.K., kand.tekhn.nauk,  
starshiy nauchnyy sotrudnik; KHODATAYEV, V.P., kand.tekhn.  
nauk. Prinimal uchastiye: ANDRULIONIS, Ye.P., kand.tekhn.  
nauk, mladshiy nauchnyy sotrudnik. SKALOV, K.Yu., kand.tekhn.  
nauk, red.; KHITROV, P.A., tekhn.red.

[Basis for construction of road transportation junctions]  
Osnovy postroeniia transportnykh uzlov. Pod obshchei red.  
S.V.Zemblinova. Moskva, Gos.transp.zhel-dor.izd-vo, 1959.  
464 p. (MIRA 12:9)

(Transportation) (Streets)

KOGAN, Liber Ayzikovich, kand.tekhn.nauk; GOKHBERG, Yevgeniy Naumovich;  
VEKSLER, Vladimir Markovich; KHOTIN, Boris Mikhaylovich;  
Prinimali uchastiye: PETROVA, T.I., ANAN'YEVA, S.A.; TAL', K.K.;  
BUTSKIY, A.M.; LOBOV, A.A. BOBROVA, Ye.N., tekhn.red.

[Containers] Konteinery. Pod obshchsei red. L.A.Kogana. Moskva,  
Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshchenia,  
1960. 318 p. (MIRA 14:3)  
(Railroads--Freight) (Containers)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

TAL', K.K., kand.tekhn.nauk

Methods for calculating the capacity of stations. Zhel.dor.transp.  
42 no.12:47-51 D '60. (MIRA 13:12)  
(Railroads--Traffic)

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CIA-RDP86-00513R001754720019-5"

VESTERMAN, G.Z., kand. tekhn. nauk; PANTELYEV, F.I., kand. tekhn. nauk; GONOLYAKO, I.M.; TAL', K.K.; GUSEVA, K.G.; LUGOVVOY, T.A.; MASSAN, A.M.; GALKIN, N.V.; SAPIYGINA, G.M.; CHESENOKOV, D.S.; DROZDKOV, V.I.; IZUMOV, P.S.; ZAK, B.O.; KOLOGID, P.Ye.; MAKSIMOVICH, L.N.; ZHOROVSKAYA, M.I.; PAVLOVSKAYA, S.A.; BORISOV, A.V.; SELIVANETS, N.Ye.; ITKES, V.F.; YATSEKOVICH, Ya.D.; KOZYRSKIY, N.P.; NIKITIN, V.D.; NEKLJUFAYEVA, Z.A., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Design and planning of railroad stations and junctions]  
Proektirovanie zheleznodorozhnykh stantsii i uzlov; spravochnoe i metodicheskoe proizvodstvo. Moskva, Transzheldor-izdat, 1963. 443 p.  
(MIRA 16:12)

1. Nauchno-issledovatel'skiy institut transportnogo stroitel'stva (for Guseva). 2. Gosudarstvennyy institut tekhniko-ekonomicheskikh izyskanii i proektirovaniya zheleznodorozhного transporta (for Zak). 3. Kiyevskiy gosudarstvennyy proyektno-izyskatel'skiy institut (for Kozyrskiy). 4. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta Im. I.V. Stalina (for Nikitin).

(Railroad engineering)

VERTSMAN, G. Z., kand. tekhn. nauk; TAL', K. K., kand. tekhn. nauk;  
SABIWIN, L. A., inzh.

Problems of using electronic digital computers for planning  
stations and junctions. Transp. stroi. 13 no. 3:45-47 Mr '63.  
(MIRA 16:4)

(Electronic digital computers)  
(Railroads—Construction)

TAL', K.K., kand.tehn.nauk; FEDOTISTOV, V.M., inzh.

Some conclusions drawn from the practice of using  
electronic digital computers in planning the Moscow  
railroad junction. Transp. stroi. 16 no.1:38-40  
Ja '66. (MHA 19:1)

SHCHEBAK, M.; KOMECH, I.; TAL', R.; BABENKO, P.

Letters and correspondence. Sov.profsoiuzy 7 no.9:35-36 My '61.  
(MIRA 14:4)

1. Chlen rabkorovskogo posta zhurnala "Sovetskiye profsoyuzy" (for  
Shcherbak). 2. Presdsedatel' raykoma profsoyuza rabotnikov kul'tury,  
g.Kakhovka (for Babenko).

(Nezhin—Agricultural machinery industry)  
(Zhitomir—Employees, Dismissal of)

ENDOCRINOLOGY

HUNGARY/UNITED ARAB REPUBLIC

ISMAIL, A. A., EL-RIDI, M. S. ABDEL-HAY, A., KAMEL, G., TALAAT, M., El Mofty Metabolic and Endocrine Research Unit, Biochemistry Department, Faculty of Medicine, Cairo; and TAPQUZADA, Salwa, National Research Centre, Dokki, both in the United Arab Republic.

"Interrelation Between Thyroid Hormones and Essential Fatty Acids"

Budapest, Acta Physiologica Academiae Scientiarum Hungaricæ, Vol 29, No 3-4, 8 Jun 1966, pp 225-234.

Abstract: [English article] Since both fatty acids and thyroid hormones are frequently used as hypocholesterolaemic agents, the authors investigated the effect of thyroid hormone administration on rats maintained on a synthetic diet deficient in essential fatty acids. The deficiency reduced fertility in both sexes; fetuses were absorbed in some cases and the females failed to lactate. Triiodothyronine, in doses of 1.0 µg /rat/day markedly enhanced the essential fatty acid deficiency; thyosine, in doses of 10 µg /rat/day showed no such effect. The symptoms disappeared upon treatment with highly unsaturated fatty acids in doses of 0.1 ml /rat/day. 26 references, including 1 German and 25 Western. (Manuscript received 21 Jun 1965).

1/1

TALABAYEV, B.

Effect of phenothiazine on helminthism of the alimentary tract  
in sheep. Dokl.AN Tadzh.SSR no.17:45-51 '56. (MLRA 9:11)

1. Samarkandskiy sel'skokhozyaystvennyy institut imeni V.V.Kuy-  
bysheva.  
(Worms, Intestinal and parasitic) (Parasites--Sheep)  
(Phenothiazine)

TALAFER, J.

TALAFER, J. Aluminate cements and physico-chemical processes occurring during their binding and hardening; excerpts from a dissertation. p. 161.

Vol. 8, no. 5, May 1956  
EPITOANYAG  
TECHNOLOGY  
Budapest, Hungary

So: East European Accession, Vol. 6, No. 5, May 1957

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

TALAI..., J.

Physicochemical processes occurring during the binding and hardening  
of aluminate cements. p.202. EPITOANYAG. Budapest. Vol. 3, no. 6,  
June 1956.

SOURCE: East European Acquisitions List (EEAL), Library of Congress  
Vol. 5, No. 12, December 1956.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

TALABER, J.

TALABER, J. - Physicochemical processes occurring during the binding and  
hardening of aluminate cements. Pt. 4, p. 295  
Vol. 8, no. 8, Aug. 1956  
Epitoanyag - Budapest, Hungary

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4, April 1957

TALABER, J.

TALABER, J. Physicochemical processes occurring during the solidification of concrete which contains aluminum and its binding. Pt. 4, p. 349.

Vol. 8, No. 4, Sept. 1957.

EPITOCHYAL  
TECHNOLOGY  
Budapest, Hungary

See: East European Accession, Vol. 5, No. 2, Feb. 1957

Hochschule für Materialprüfung - Chemische Technologie  
Application. Ceramics. Glass. Binders. Concrete.

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25967

Author : Talaber Jozsef

Inst : -

Title : Rapidly Hardening Concrete

Orig Pub : Epitoanyag, 1957, 9, No 3, 109-121

Abstract : For the production of rapidly hardening concrete it is recommended to resort to fine grinding, with a high (up to 0.99) coefficient of saturation of the silica with lime, and a low content of SiO<sub>2</sub>.

Card 1/1

- 28 -

TALABER, Jozsef, dr.

Achievements and tasks in the Scientific Association of the  
Silicate Industry. Epitoanyag 15 no.2/3:52-55 F-Mr '63.

1. Szilikatipari Tudomanyos Egyesulet fotikara.

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

TALABOV, A.

Oaks in the Botanical Garden of the Academy of Sciences of the Uzbek  
S.S.R. Uzb. biol. zhur. 8 no.4:49-52 '64. (MIRA 18:7)

1. Botanicheskiy sad AN UzSSR.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

TALACH, Ryszard, mgr

Organization of the repair management in textile enterprises.  
Przegl wlokiens 17 no. 4/5: 159-162 Ap-My '63.

1. University, Lodz.

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

Tadeusz Ryazanow

Development of the specialization process in the world textile production. Przegl. Włokien 18 no.12: 574-577 D '64.

I. Department of Business Economics at the Lodz University.

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CIA-RDP86-00513R001754720019-5"

1. Leishmania sp. found in skin biopsy specimen from patient with multiple lymphadenopathy, nodules, and ulceration. Lesions were painless, non-tender, non-ulcerated, non-crusted, non-oozing, non-purulent, non-necrotic, non-erythematous, and non-itchy. (1)

2. Leishmania sp. found in skin biopsy specimen from patient with multiple non-tender, non-ulcerated, non-crusted, non-oozing, non-purulent, non-necrotic, non-erythematous, and non-itchy skin lesions. (1)

16(1) PHASE I BOOK EXPLOITATION SOV/2508  
Matematicheskoye prosvetitel'nye, Matematika, yeye pedovedaniye,  
prirodoznaniya i istoriya, vyp. 4 (Mathematical Education,  
Mathematics, its Teaching, Application and History, Nr. 4)  
Moscow, Gosstekhnizdat, 1959. 15,000 copies printed.

Ed. I. N. Bronshteyn, Editorial Board of Series: I.N. Bronshteyn,  
A.I. Markushevich, I.M. Yaslon, Tech. Ed.: S.N. Akhiezer.

PURPOSE: This book is intended for persons without an extensive  
mathematical education who are interested in trends in con-  
temporary mathematics. The book may be useful to high school  
mathematics teachers.

COVERAGE: The book contains reviews of articles, reviews, and scientific  
and educational reports, some of which are translations from  
other languages. The state of modern mathematics is covered,  
including applications, history, teaching of mathematics in  
schools, and mathematical developments in the USSR and abroad.  
One section deals with scientific and pedagogical life in the  
USSR and another contains reviews of certain mathematical publica-  
tions. Some mathematical background is necessary to understand  
the book; certain articles require a knowledge of higher mathe-  
matics.

Mathematical Education: (Cont.)

- SOV/2508  
4. Without the Use of Cardan Formulas 208  
Sapir, I.N. Two Tests of Divisibility by Any Odd Number 209  
Not Ending in 5
- IV. SCIENTIFIC AND PEDAGOGICAL CHRONICLE
- Nazarin, P.P. The 16th Conference of Mathematics Departments of  
Pedagogical Institutes in the Urals Region 213  
Smolyanov, M.I. Meeting of Teachers of Correspondence Pedagogical  
Institutes of the RSFSR 213  
Talal, I.Ya. On the Joint Scientific-Methodological Seminar of  
the Mathematical Departments of Moscow Universities 227  
Innovations in Mathematical Science  
I. Muchnik, A.A., and R. Prud'ore, The Problem of the  
Recursiveness of Enumerable Sets 233

Card 6/8

6-3. Physiology, etc.  
(Blood, etc.)

B6

39437. Estimation of cholesterol by suppressing the polarographic maximum. E. Talafant - (Coll. Trav. chim. Tech., 1950, 18, 232-239). - The determination of cholesterol is based on its pptn. by digitonin from acetone and determination of the excess of digitonin. This determination is based on the suppression of the polarographic max. of Co in an aq. NH<sub>2</sub>-NH<sub>3</sub>Cl buffer. A calibration curve for amounts of cholesterol up to 300 mg. is given. The method may be used for determining both free and combined cholesterol in blood-serum. The vals. thus obtained agree well with those given by the gravimetric method of Szent-Gyorgyi and Tomizuka.

SEVELA, M.; TALAFANT, E.

Effect of alloxan on liver phosphorylase. Biol. listy, Praha 32 no.3:  
213-216 Dec 51. (CIML 21:5)

1. Of the Institute of Medical Chemistry (Head--Prof. O. Wagner, M.D.)  
of Masaryk University, Brno.

*Biological General 11 (*

CA

**Effect of alloxan on the activity of purified muscle phosphorylase.** Edmund Talafant and Miroslav Sevcik (Masaryk Univ., Brno, Czech.). *Chem. Listy* 46, 182-6 (1952).—Enzymic processes effected *in vitro* by purified muscle phosphorylase in the presence of added 0.015 M cysteine are suppressed by 0.01 M alloxan. Activation with cysteine and inhibition with alloxan is greater with more highly purified samples of phosphorylase. Alloxan (0.01 M) does not suppress the effect of the phosphorylase activated by genuine protein of blood serum in a diln. of 1:50. A decrease in the no. of cysteine SH groups caused by alloxan was noted by amperometric argentometric titration. No such decrease in SH groups was found with blood serum. M. Hudlický

TALAFANT, E.; SEVELA, M.

The effect of alloxan on purified muscle phosphorylase [with summary in English]. Sbor.Chekh.khim.rab. 18 no.1:151-159 P '53. (MLRA 7:6)

1. Department of Medical Chemistry, Masaryk University, Brno.  
(Alloxan) (Phosphorylase)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5

*Talafout, Edmund*

Review on porphyrin metabolism and iron transport  
In man. Edmund Talafout (Masaryk Univ., Brno, Czech.).  
*Lekarske listy*, 1987, 10, 1, p. 1-10. A review. L. J. U.

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CIA-RDP86-00513R001754720019-5"

ALBERT, N.

Chemical Abst.

Vol. 48 No. 9

May 10, 1954

Biological Chemistry

②  
Nature of direct and indirect bilirubin. Vl. Talafant  
(Masaryk Univ., Brno, Czech.) *Biochim. et Biophys. Acta* 13, 159(1954).—During electrophoretic expts. on filter paper the direct-reacting pigment from bile migrated together with conjugated deoxycholate. No cholate migrated with it. Rather, the indirect form of bilirubin did not move at all, acting like free bilirubin. Morton Pader

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CIA-RDP86-00513R001754720019-5

CZECHI

The nature of direct and indirect bilirubin. Edmund  
Talafout. Collection Czechoslov. Chem. Commun. 19,  
- 1344-C(1954)(in English).—See C.A. 48, 13747i.  
E. J. C.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754720019-5"

TALAFANT, EDMUND.

The nature of direct and indirect bilirubin. Edmund  
Talafant (Masarykova Univ., Brno, Czech.). *Chem*

~~ic Ind~~ (1954); cf. C.A. 48, 5243b.—Bilirubin giving  
the direct van den Bergh reaction moves in paper electro-  
phoresis always with conjugate deoxycholate, never with  
conjugate cholate. The bilirubin showing the direct re-  
action is therefore supposed to be the bilirubin combined  
with the conjugate deoxycholate. This combination in-  
creases the highly polar nature of the direct-reacting dye.  
The direct bilirubin is not identical with vinylneoxantho-  
bilirubin acid nor with neoxanthobilirubin acid. The direct  
and indirect diazo reaction is not explainable by different  
adsorption of bilirubin on proteins. Both forms of bilirubin  
are adsorbed on serum albumin and serum  $\alpha$ -globulins. In-  
direct bilirubin does not move in paper electrophoresis at  
pH 6.8. It behaves similarly to free bilirubin, and is ad-  
sorbed to serum albumin and serum  $\alpha$ -globulins. Reagents  
used in the indirect reaction have the purpose of keeping  
bilirubin dissolved by their dissolving effect, by complex  
formation, or by maintaining sufficiently high pH during  
coupling. M. Hudlický

TALAFANT, E.

C Z E C H

✓The nature of direct and indirect bilirubin. II. Effect of strong alkalies and acids on direct bilirubin. E. Talafant (Masarykova Univ., Prague). *Chem. Listy* 48, 1000 (1954); cf. *C.A.* 48, 13747i.—Deproteinized human bile was treated with 2*N* NaOH, 2*N* HCl, and *N* NaCl soln., and the reaction mixts. were, after 2 hrs., neutralized and subjected to paper electrophoresis at pH 6.8. The colored strip stayed at the start with the samples treated with NaOH and HCl and gave no diazo reaction. From the expt. it follows that the direct bile pigment splits off the indirect pigment (bilirubin) by the action of NaOH, or, in bile, by prolonged standing. M. Hudlický

*EDWARD THOMAS EDMOND*

The relation between the nature of bile pigment and the stability of the albumin-bilirubin complexes. Eduard Talmajer (Ustav lekařské chemie, Brno, Czechoslovakia). *Český Čas. 562-4 (1954).* - The difference between the direct (I) and indirect (II) bilirubin cannot be explained by either the protein binding of II or by the presence of catalysts and salt formation. By its action upon the paper, I accompanies deoxycholic acid (*Chem. Listy* 45, 752 (1951)). When II (Na salt) and I ( $\text{Na}_2\text{SO}_4$ ) product from dog bile (Bénard, *et al.*, *C.A.* 45, 2877) not entirely freed from bile salts are dialyzed against phosphate buffer, pH 7.8, or borate, pH 8.8 (contg. acetone), the presence of serum prevents dialysis of II; the dialysis of I is not entirely prevented. The addition of bile salts increase the dialyzability; this effect is more pronounced in the case of I. Bilirubin from the serum of a patient with obstructive jaundice passes only slightly through the cellophane membrane; bile salts cause further dialyzability. On paper electrophoresis II does not migrate and I moves toward the anode. In the presence of serum both I and II run together with albumin. Less firm binding of I on serum albumin, as shown by the dialysis expts., could facilitate the elimination of the pigment by the kidneys. — *Ivo M. Hale*

TALAFANT, E.

C Z E C H

The nature of direct and indirect bilirubin. III. Transformation of the bile pigments in bile. E. Talafant (Masarykova Univ., Brno, Czech.). *Chem. Listy* 49, 574-6 (1955); cf. *C.A.* 49, 4765i.—The transformation of the direct into indirect bile pigment (bilirubin) is possible not only by alkalies or acids, but also by an enzyme occurring in bile. M. Hudlický

Talafant, Ed

✓ Survey of the properties and transformations of the ~~the~~ pigments. Ed. Talafant (Ústav Lékařskou Chem., Brno, Czech.). Časopis Lékařů Českých 94, 1216-19(1955).— Different types of van den Berg reactions cannot be attributed to differences in the binding to proteins. Of the 3 main diazo-reactive pigments occurring in plasma, indirect apolar prehepatic pigment corresponds to unconjugated bilirubin. Both direct pigments, designated as pigment I and II by Cole, et al. (C.A. 48, 10907g) behave as chem. compounds of bilirubin with conjugated deoxycholic acid (I). Pigment I would contain 1 mol. of I, while pigment II, would contain 2 mols. of I per mol. of bilirubin.

L. M. Hais

*Tulafant Edmund*

*me* ✓ The nature of direct and indirect bilirubin. IV. The effect of hepatic and pancreatic enzymes on the direct bile pigment. Edmund Tulafant (Masarykova Univ., Brno, Czech.), *Chem. Listy* 50, 817-20(1956); cf. *C.A.* 49, 10468z.—Exts. from hog liver and pancreas dried with  $\text{Me}_2\text{CO}$  split from the direct bile pigment apolar (indirect) bilirubin (I) which could be extd. by  $\text{CHCl}_3$ . The optimum pH of this enzymic reaction is 6.5-7. The direct bile pigment is, therefore, a compd. contg. I as one component rather than a labile complex of I with some other compd. No inhibition by diisopropyl fluorophosphate of this enzymic action was observed. Besides the above enzyme, the bile pigment was cleaved with  $\beta$ -glucuronidase from bacteria and from spleen. M. Hudlický

TALAFANT, E.

✓ 5110. Properties and composition of bile pigment giving a direct diazo reaction. E. Talafant *Nature, Lond.*, 1958, 178, 312 (Dept. of Med. Chem., Masaryk Univ., Brno, Czechoslovakia).—Glucuronic acid was demonstrated in the direct pigment, the bile pigment giving the van den Bergh reaction with the diazo reagent in the absence of organic solvents, by means of paper chromatography.

J. B. PARR